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10/036,360	01/07/2002	Hyun-sook Kang	Q65110	5452

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EXAMINER	
MILORD, MARCEAU	

ART UNIT	PAPER NUMBER
2682	4

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/036,360	Applicant(s) KANG ET AL.	
	Examiner Marceau Milord	Art Unit 2682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haartsen (US Patent No 6754250 B2) in view of Callaway, Jr et al (US Patent No 6275500 B1).

Regarding claims 1-2, Haartsen discloses a wireless communication apparatus connected with one or more slave devices in a network (figs. 1-5), the wireless communication apparatus having information about the connected slave devices (col. 6, lines 2-13; col. 7, lines 6- 33), the apparatus comprising: a transceiving portion for receiving externally transmitted data, and transmitting a signal (col. 8, lines 1-30; col. 8, line 60- col. 9, line 52); and transmitting Piconet

information about the connected slave devices of the network (col. 9, line 42- col. 10, line 41; col. 11, line 6-col. 12, line 36).

However, Haartsen does not specifically disclose a controller for requesting through the transceiving portion a certain slave device of the connected slave devices to perform a function of a master device for a predetermined time.

On the other hand, Callaway, from the same field of endeavor, discloses a transceiver device acting as a master among a plurality of communication devices potentially acting as slaves to the master. The transceiver device includes a transmitter, a receiver coupled to the transmitter, and a processor coupled to the transmitter and the receiver. The processor is programmed to poll the slaves at a first interval and then receive a communication request while polling from a first slave of the plurality of communication devices to communicate with at least a second slave of the plurality of communication devices. Furthermore, the master is able to maintain control of the vectored slaves by using the parked mode where the master polls the slaves at a less frequent interval as the slaves independently communicate among themselves. The master polls the slaves to receive status reports on the slaves' independent communication, e.g., that communication among the slaves has terminated, and also so that the master may maintain control of the vectored slaves (col. 3, line 16- col. 4, line 23). In addition, Callaway shows in figure 15, a transceiver that can also represent a communication device acting as a slave among a plurality of slaves and among a transceiver acting as a potential master to the slave. In this case the processor would be programmed to either transmit a communication request to the potential master during a first polling interval to establish communication between the communication device and at least the first slave and then receive communication

resource parameters for communication between the communication device and at least the first slave from the potential master if attempting to initiate communication with at least a first slave among the plurality of slaves (figs. 13-15;col. 4, line 46- col. 5, line 50; col. 6, line 7- col. 7, line 46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Callaway to the communication system of Haartsen in order to control dynamically and efficiently talk groups system created from groups of slave devices operating under control of a master device.

Regarding claim 3, Haartsen as modified discloses a wireless communication apparatus connected with one or more slave devices in a network (figs. 1-4), wherein the controller is connected to a host via a communication interface (col. 8, line 52- col. 9, line 50).

Regarding claim 4, Haartsen as modified discloses a wireless communication apparatus connected with one or more slave devices in a network (figs. 1-4), wherein the Piconet information includes an active member address allocated to the connected slave devices in an active node of the network (col. 9, line 42- col. 10, line 41; col. 11, line 6-col. 12, line 36).

Regarding claim 5, Haartsen as modified discloses a wireless communication apparatus connected with one or more slave devices in a network (figs. 1-4), wherein the controller processes the signal requested by a host; and processes the signal received through the transceiving portion (col. 8, line 52- col. 9, line 50).

Regarding claim 6, Haartsen as modified discloses a wireless communication apparatus connected with one or more slave devices in a network (figs. 1-4), wherein the transceiving portion processes a signal from the outside and then sends out a transmission-intended packet (col. 8, lines 1-67).

Regarding claims 7-8, 10, Haartsen discloses a wireless communication apparatus (figs. 1-5) connected with a master device in a network including the master device and slave devices (col. 6, lines 2-13; col. 7, lines 6- 33), comprising: a transceiving portion for receiving externally transmitted data, and transmitting a signal (col. 8, lines 1-30; col. 8, line 60- col. 9, line 52;col. 9, line 42- col. 10, line 41; col. 11, line 6-col. 12, line 36).

However, Haartsen does not specifically disclose a controller for receiving a request from the master device that requests a certain slave device to perform a function of the master device for a predetermined time.

On the other hand, Callaway, from the same field of endeavor, discloses a transceiver device acting as a master among a plurality of communication devices potentially acting as slaves to the master. The transceiver device includes a transmitter, a receiver coupled to the transmitter, and a processor coupled to the transmitter and the receiver. The processor is programmed to poll the slaves at a first interval and then receive a communication request while polling from a first slave of the plurality of communication devices to communicate with at least a second slave of the plurality of communication devices. Furthermore, the master is able to maintain control of the vectored slaves by using the parked mode where the master polls the slaves at a less frequent interval as the slaves independently communicate among themselves. The master polls the slaves to receive status reports on the slaves' independent communication, e.g., that communication among the slaves has terminated, and also so that the master may maintain control of the vectored slaves (col. 3, line 16- col. 4, line 23). In addition, Callaway shows in figure 15, a transceiver that can also represent a communication device acting as a slave among a plurality of slaves and among a transceiver acting as a potential master to the slave. In

this case the processor would be programmed to either transmit a communication request to the potential master during a first polling interval to establish communication between the communication device and at least the first slave and then receive communication resource parameters for communication between the communication device and at least the first slave from the potential master if attempting to initiate communication with at least a first slave among the plurality of slaves (figs. 13-15;col. 4, line 46- col. 5, line 50; col. 6, line 7- col. 7, line 46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Callaway to the communication system of Haartsen in order to control dynamically and efficiently talk groups system created from groups of slave devices operating under control of a master device.

Claim 9 contains similar limitations addressed in claim 2, and therefore is rejected under a similar rationale.

Regarding claim 11, Haartsen as modified discloses a wireless communication apparatus (figs. 1-5), wherein the Piconet information includes an active member address allocated to the slave devices, other than the certain slave device, in an active mode of the network (col. 9, line 42- col. 10, line 41; col. 11, line 6-col. 12, line 36).

Regarding claim 12, Haartsen as modified discloses a wireless communication apparatus (figs. 1-5), wherein the controller updates the Piconet information about the slave devices, other than the certain slave device, while the certain slave device performs the function of the temporary master device, and sends the updated information to the master device after the predetermined time (col. 9, line 42- col. 10, line 41; col. 11, line 6-col. 12, line 36).

Regarding claim 13, Haartsen discloses a wireless communication method of a wireless communication apparatus (figs. 1-5) which is connected with one or more slave devices in a network, and includes information about the connected slave devices (col. 6, lines 2-13; col. 7, lines 6- 33; col. 8, lines 1-30; col. 8, line 60- col. 9, line 52), the wireless communication method comprising the steps of: sending Piconet information about other slave devices of the connected slave devices of the network to the certain slave device (col. 9, line 42- col. 10, line 41; col. 11, line 6-col. 12, line 36).

However, Haartsen does not specifically disclose the steps of requesting a certain slave device of the connected slave devices to perform a function of a master device for a predetermined time.

On the other hand, Callaway, from the same field of endeavor, discloses a transceiver device acting as a master among a plurality of communication devices potentially acting as slaves to the master. The transceiver device includes a transmitter, a receiver coupled to the transmitter, and a processor coupled to the transmitter and the receiver. The processor is programmed to poll the slaves at a first interval and then receive a communication request while polling from a first slave of the plurality of communication devices to communicate with at least a second slave of the plurality of communication devices. Furthermore, the master is able to maintain control of the vectored slaves by using the parked mode where the master polls the slaves at a less frequent interval as the slaves independently communicate among themselves. The master polls the slaves to receive status reports on the slaves' independent communication, e.g., that communication among the slaves has terminated, and also so that the master may maintain control of the vectored slaves (col. 3, line 16- col. 4, line 23). In addition, Callaway

shows in figure 15, a transceiver that can also represent a communication device acting as a slave among a plurality of slaves and among a transceiver acting as a potential master to the slave. In this case the processor would be programmed to either transmit a communication request to the potential master during a first polling interval to establish communication between the communication device and at least the first slave and then receive communication resource parameters for communication between the communication device and at least the first slave from the potential master if attempting to initiate communication with at least a first slave among the plurality of slaves (figs. 13-15;col. 4, line 46- col. 5, line 50; col. 6, line 7- col. 7, line 46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Callaway to the communication system of Haartsen in order to control dynamically and efficiently talk groups system created from groups of slave devices operating under control of a master device.

Regarding claim 14, Haartsen as modified discloses a wireless communication method of a wireless communication apparatus (figs. 1-5), comprising exchanging data transmission timing with the certain slave device requested to perform the function of the master device (col. 9, lines 2-52).

Regarding claim 15, Haartsen as modified discloses a wireless communication method of a wireless communication apparatus (figs. 1-5), wherein the Piconet information contains an active member address allocated to the other slave devices in an active mode of the network (col. 9, line 17- col. 10, line 43).

Regarding claim 16, Haartsen as modified discloses a wireless communication method of a wireless communication apparatus (figs. 1-5), wherein the certain slave device receives the

Piconet information about the other slave devices from the master device, and communicates as a temporary master device with the other slave devices for the predetermined time (col. 9, line 2-col. 10, line 41; col. 11, line 6-col. 12, line 36).

Regarding claim 17, Haartsen discloses a wireless communication method of a wireless communication apparatus (figs. 1-5) connected with a master device in a network (col. 6, lines 2-13; col. 7, lines 6- 33), comprising the steps of: receiving Piconet information, from the master device, about other connected slave devices in the network (col. 8, lines 1-30; col. 8, line 60- col. 9, line 52); and communicating with the other slave devices of the network as the temporary master device for the predetermined time (col. 9, line 42- col. 10, line 41; col. 11, line 6-col. 12, line 36).

However, Haartsen does not specifically disclose the steps of requesting that a slave device perform a function of a temporary master device for a predetermined time.

On the other hand, Callaway, from the same field of endeavor, discloses a transceiver device acting as a master among a plurality of communication devices potentially acting as slaves to the master. The transceiver device includes a transmitter, a receiver coupled to the transmitter, and a processor coupled to the transmitter and the receiver. The processor is programmed to poll the slaves at a first interval and then receive a communication request while polling from a first slave of the plurality of communication devices to communicate with at least a second slave of the plurality of communication devices. Furthermore, the master is able to maintain control of the vectored slaves by using the parked mode where the master polls the slaves at a less frequent interval as the slaves independently communicate among themselves. The master polls the slaves to receive status reports on the slaves' independent communication,

e.g., that communication among the slaves has terminated, and also so that the master may maintain control of the vectored slaves (col. 3, line 16- col. 4, line 23). In addition, Callaway shows in figure 15, a transceiver that can also represent a communication device acting as a slave among a plurality of slaves and among a transceiver acting as a potential master to the slave. In this case the processor would be programmed to either transmit a communication request to the potential master during a first polling interval to establish communication between the communication device and at least the first slave and then receive communication resource parameters for communication between the communication device and at least the first slave from the potential master if attempting to initiate communication with at least a first slave among the plurality of slaves (figs. 13-15;col. 4, line 46- col. 5, line 50; col. 6, line 7- col. 7, line 46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Callaway to the communication system of Haartsen in order to control dynamically and efficiently talk groups system created from groups of slave devices operating under control of a master device.

Regarding claim 18, Haartsen as modified discloses a wireless communication method of a wireless communication apparatus (figs. 1-5) connected with a master device in a network (col. 6, lines 2-13; col. 7, lines 6- 33), wherein step (b) comprises the step of exchanging data transmission timing with the master device (col. 9, lines 2- 64).

Regarding claim 19, Haartsen as modified discloses a wireless communication method of a wireless communication apparatus (figs. 1-5) connected with a master device in a network (col. 6, lines 2-13; col. 7, lines 6- 33), wherein the Piconet information includes an active member

address allocated to the connected slave devices in an active mode of the network (col. 9, line 2- col. 10, line 43).

Regarding claim 20, Haartsen as modified discloses a wireless communication method of a wireless communication apparatus (figs. 1-5) connected with a master device in a network (col. 6, lines 2-13; col. 7, lines 6- 33), wherein a slave device performing the function of time temporary master device communicates with the other slave devices according to a frequency hopping sequence and a clock of the master device (col. 8, lines 1-30; col. 9, line 2- col. 10, line 43).

Regarding claim 21, Haartsen as modified discloses a wireless communication method of a wireless communication apparatus (figs. 1-5) connected with a master device in a network (col. 6, lines 2-13; col. 7, lines 6- 33), wherein step (c) comprises the step of updating, as the temporary master device, the Piconet information about the other connected slave devices of the network, and sending the updated information to the master device after the predetermined time (col. 9, line 42- col. 10, line 41; col. 11, line 6-col. 12, line 36).

Regarding claim 22, Haartsen discloses a wireless communication system (figs. 1-5) comprising: one or more slave devices connected to the wireless communication system (col. 6, lines 2-13; col. 7, lines 6- 33); and a master device having information about the connected slave devices (col. 8, lines 1-30; col. 8, line 60- col. 9, line 52), exchanges data transmission timing with the certain slave device, and sends Piconet information about other slave devices of the connected slave device, and the certain slave device receives the Piconet information about the other slave devices from the master device (col. 9, line 42- col. 10, line 41; col. 11, line 6-col. 12, line 36).

However, Haartsen does not specifically disclose the features of a master device that requests a certain slave device of the connected slave devices to perform a function of a temporary master device for a predetermined time; and communicates as the temporary master device with the other slave devices for the predetermined time.

On the other hand, Callaway, from the same field of endeavor, discloses a transceiver device acting as a master among a plurality of communication devices potentially acting as slaves to the master. The transceiver device includes a transmitter, a receiver coupled to the transmitter, and a processor coupled to the transmitter and the receiver. The processor is programmed to poll the slaves at a first interval and then receive a communication request while polling from a first slave of the plurality of communication devices to communicate with at least a second slave of the plurality of communication devices. Furthermore, the master is able to maintain control of the vectored slaves by using the parked mode where the master polls the slaves at a less frequent interval as the slaves independently communicate among themselves. The master polls the slaves to receive status reports on the slaves' independent communication, e.g., that communication among the slaves has terminated, and also so that the master may maintain control of the vectored slaves (col. 3, line 16- col. 4, line 23). In addition, Callaway shows in figure 15, a transceiver that can also represent a communication device acting as a slave among a plurality of slaves and among a transceiver acting as a potential master to the slave. In this case the processor would be programmed to either transmit a communication request to the potential master during a first polling interval to establish communication between the communication device and at least the first slave and then receive communication resource parameters for communication between the communication device and at least the first slave

from the potential master if attempting to initiate communication with at least a first slave among the plurality of slaves (figs. 13-15;col. 4, line 46- col. 5, line 50; col. 6, line 7- col. 7, line 46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Callaway to the communication system of Haartsen in order to control dynamically and efficiently talk groups system created from groups of slave devices operating under control of a master device.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lau et al US Patent No 6690657 B1 discloses a multi-channel distributed wireless repeater network, and method of operation.

Philips US Patent No 6748195 B1 discloses a wireless device that uses profiles with one or more contexts, which defines various operating situations.

Larsson et al US Patent No 6535498 B1 discloses an ad-hoc networks using reactive routing protocols the route between the source node and the decision node is not updated until the route is broken.

Johansson et al US Patent No 6480505 B1 discloses a method and apparatus for improving channel utilization and throughput in an ad-hoc wireless communication system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marceau Milord whose telephone number is 703-306-3023. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MARCEAU MILORD

Marceau Milord

Examiner

Art Unit 2682